

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
12 September 2003 (12.09.2003)

PCT

(10) International Publication Number
WO 03/075260 A1

(51) International Patent Classification⁷: G10L 15/18

(21) International Application Number: PCT/IB03/00834

(22) International Filing Date: 3 March 2003 (03.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 102 09 928.6 7 March 2002 (07.03.2002) DE

(71) Applicant (for DE only): PHILIPS INTELLECTUAL PROPERTY & STANDARDS GMBH [DE/DE]; Stein-damm 94, 20099 Hamburg (DE).

(71) Applicant (for all designated States except DE, US): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventor; and

(75) Inventor/Applicant (for US only): JOUBLIN, Frank [DE/DE]; c/o Philips Intellectual Property & Standards GmbH, Weiss hausstr. 2, 52066 Aachen (DE).

(74) Agent: MEYER, Michael; Philips Intellectual Property & Standards GmbH, Weiss hausstr. 2, 52066 Aachen (DE).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

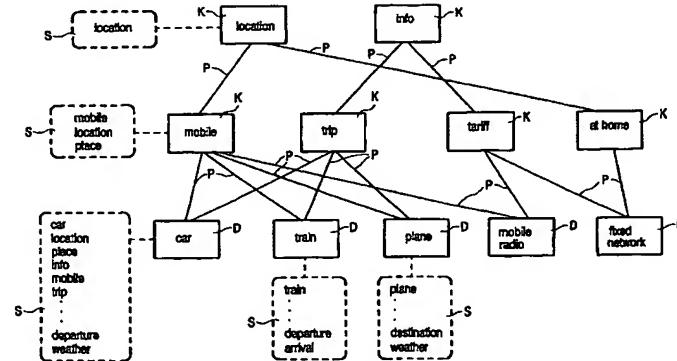
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: METHOD OF OPERATING A SPEECH DIALOGUE SYSTEM



WO 03/075260 A1

(57) Abstract: A method of operating a speech dialogue system (1) is described. For controlling the dialogue for selecting one of various services (9, 10) of the dialogue system (1) by the user, a database (6) is used which has a hierarchical data structure (DS) with a plurality of nodes (K) and a plurality of paths (P) for interconnection of the nodes (K) and for connecting the nodes (K) to service objects (D) which are arranged at a respective end of the path (P). The service objects (D) represent the services available (9, 10). The nodes (K) represent respective categories in which further categories and/or the services classified thereunder are arranged. At least to part of these service objects (D) and/or nodes (K) leads a plurality of paths (P). To each node (K) and each service object (D) is furthermore assigned at least one keyword (S). Search words are extracted from a spoken entry of the user and on the basis of the search words a number of candidate nodes (K) and/or candidate service objects (D) is sought, whose assigned keywords (S) match the search words in accordance with a predefined acceptance criterion. The search method is executed in various search steps until the number of candidate nodes (K) and/or candidate service objects (D) is situated above a predefined minimum number and below a predefined maximum number. Then a speech output menu is generated and the categories represented by the candidate nodes (K) and/or candidate service objects (D) found and/or services (9, 10) are announced. In addition, a respective speech dialogue system (1) is described.